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AMENDMENT TO THE CLAIMS

Please cancel claims 17 and 18 without prejudice or disclaimer. Please amend the claims as follows:

1.   (Currently amended) A computer implemented method for an auction comprising:

establishing an auction system;

receiving at least one constraint specified by a participant in the auction, wherein the constraint characterizes combinations of items desired by the participant within the auction system;

generating a proposal based on the constraints specified by the participant using a column generation formulation, said proposal comprising a set of bids from the participant that satisfies all of the constraints specified by the participant; and

determining a winner in the auction, based on said proposal the constraint specified by the participant.

2.   (Previously Presented) A method according to claim 1, wherein the auction system is selected from a group consisting of an open cry auction, an ascending bid auction, and a descending bid auction.

3.   (Previously Presented) A method according to claim 1, wherein the constraints characterize combinations of bids from the participant for the desired items within the auction system.

4.   (Previously Presented) A method according to claim 1, further comprising enabling the auction system so that it is responsive to a budget constraint.

5.   (Previously Presented) A method according to claim 4, wherein the budget constraint is specified by the participant.

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6.   (Previously Presented) A method according to claim 1, further comprising enabling the auction system so that it is responsive to constraints selected from the group consisting of a maximum quantity constraint, a minimum quantity constraint, a precedence constraint, and a general linear constraint.

7.   (Previously Presented) A method according to claim 1, further comprising enabling the auction system so that it is responsive to seller constraints.

8.   (Previously Presented) A method according to claim 7, wherein the seller constraints specify a minimum value for a combination of items.

9.   (Previously Presented) A method according to claim 7, wherein the seller constraints specify a minimum value for a combination of a minimum number of items to be sold.

10.   (Previously Presented) A method according to claim 7, wherein the seller constraints specify a minimum value for a combination of items correlated to a precedence relationship.

11.   (Currently amended) A method according to claim 1, further comprising formulating a winner determination problem with the constraint specified by the participant as an integer program ~~problem~~.

12.   (Previously Presented) A method according to claim 11, further comprising applying the integer program for determining at least one winner.

13.   (Currently amended) A program medium executable in a computer system for facilitating an auction, the program medium comprising machine-readable instructions to cause the computer system to execute steps for:

establishing an auction system;

enabling the auction system so that it is responsive to constraints specified by a participant in the auction, wherein the constraints characterize combinations of items desired by the participant within the auction system; and

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generating a proposal, based on the constraints specified by the participant, using a column generation formulation, said proposal comprising a set of bids from the participant that satisfies all of the constraints specified by the participant.

14.   (Currently amended) A computer implemented method for facilitating an auction comprising:

receiving constraints specified by a participant in the auction, wherein the constraints characterize combinations of items desired by the participant within an auction system;

generating a proposal based on the constraints specified by the participant using a column generation formulation, said proposal comprising a set of bids from the participant that satisfies all of the constraints specified by the participant; and

formulating a winner determination problem based on said proposal ,~~with the constraints specified by the participant,~~ as an integer program, and solving said program ~~problem~~.

15.   (Previously Presented) A method according to claim 14, further comprising:

determining winners from among participants in the auction by applying the integer program.

16.   (Previously Presented) A method according to claim 14, further comprising:

specifying combinatorial bids by interpreting the constraints.

17-18. (Canceled)

19.   (Previously Presented) A method according to claim 14, wherein the constraints are represented by linear relationships between indicator variables on bids from the participant.

20.   (New) A method of conducting an auction in an auction system in which plural items are offered for auction by a seller, and plural bidders place bids on said plural items, said method comprising:

receiving from said plural bidders, plural bids on said plural items, said plural bidders specifying a set of constraints associated with said plural bids;

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     identifying for a bidder in said plural bidders, a proposal which comprises a set a bids from said bidder which satisfies all of said constraints specified by said bidder; and

     formulating an integer program based on said proposal to determine a winning combination of bids in said plural bids, and solving said integer program using a column generation technique.

21.   (New) The method of claim 20, further comprising:

     generating a user interface on a display device, said user interface comprising a display screen displaying said plural constraints.